IN THE UNITED STATES PATENT OFFICE

Applicant:	Carsten Meier
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Attorney Docket No.:	606-42-PCT-PA
For:	Method of Producing and Screening Antibodies Produced in Transgenic Plants

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Response to Notification of Defective Response and Preliminary Amendment pursuant to 37 CFR 1.115

In response to the Notification of Defective Response mailed in this matter July 3, 2006, enclosed herewith please find:

(1). Amendment to the specification, pursuant to 37 CFR 1.115
(2). Paper copy and CRF of sequence listing.

Applicants respectfully request that the following amendment to the specification be entered, pursuant to 37 CFR 1.115. Page and line numbers as used herein refer to the published international application, as filed.

This amendment contains no new matter. A sequence listing and references to SEQ ID numbers have been added to satisfy the requirements of 37 CFR 1.821 (d). These do not constitute new matter, pursuant to MPEP 2163.07, as corrections of an obvious error.

The sequence listing information recorded in computer readable format is identical to the written (on paper) sequence listing.

The commissioner is hereby authorized to charge any fees associated with this response to our Deposit Account No.: 50-3925.

In the specification:

The section identified as "Example 2" at p 9 l 6 to p 10 l 2 should be deleted and replaced with the attached replacement section, which identifies changes.

The section identified as Table I should be deleted and replaced with the attached replacement section, which identifies changes.

The enclosed "Sequence Listing" should be appended.

<REPLACEMENT SECTION> Example 2. Design of a human antibody expression cassette to be used for inserting the 25 variable motifs

A human antibody expression cassette containing both heavy chain (HC) and light chain (LC) genes coding for mABs targeted against the V3 loop of the HIV-1 virus gp120 envelope protein is described hereafter. Degenerated overlapping oligonucleotides representing different immunoglobulin variable heavy (VH) and variable light (VL) chain combinations were designed (Table 1, SEQ ID NOs: 1-5). Each immunoglobulin variable chain is Polymerase Chain Reaction (PCR)-assembled independently by virtue of the complementarity between the degenerate primers used (Figure 1). A second round of PCR is performed so that the VH and VL PCR fragments are fused to the *mas*1'2' dual promoter (DP) from the *A. tumefaciens* Ti plasmid (Velten et al., 1984). This second round of PCR is performed in presence of DP DNA and the newly synthesized VH and VL PCR fragments, whose extremities close to the immunoglobulin ATG translational start codons are overlapping the DP fragment. The immunoglobulin constant heavy (CH) and constant light (CL) chain fragments are PCR-amplified independently in presence of CH and CL DNA template using a combination of forward and reverse oligonucleotides. The CH and CL PCR reverse primers were designed so that their 5' regions respectively contain the *attB1* and *attB2* recombination sites, as well as unique restriction enzyme (RE) sites that can be used for sub-cloning the cassette. Using a PCR-based strategy, the CH and CL chain fragments are fused to the PCR fragment obtained in the second round of PCR by using CH and CL DNA templates whose upstream extremities are overlapping with the VH-DP-VL fragment. The subsequent cassette, here designed DP-HC-LC, containing HC and LC that are transcriptionally regulated by the DP promoter, and flanked by the unique RE sites and the *attB* recombination signals, is subsequently recombined or cloned into a plasmid (C2200-GATEWAY) that contains the *attB* sequences and two plant transcriptional terminators (Figure 2). Additionally, this plasmid contains all features required for bacterial selection and plant transformation. The resulting plasmid, designated here C2200-DP-HC-LC is mobilized into *E. coli* bacteria using standard procedures to generate a library containing more than 10^6 independent clones.

<REPLACEMENT SECTION> Table 1

Oligonu-cleotide	Sequence (5'→ 3')	Comment
DP1 SEQ ID NO: 1	**Ggagactgtgtcatcacgatgtc**gggaatgcacactgtagctgttgctaccaag aagaggatgatacagctccatcc**cat**cttaagatcctttatattgagatttttcaaatc agtgcgc	Overlapping with VL-1 (bold) Murine leader (underlined) Start codon (bold & underlined) DP-specific (normal font)
DP2 SEQ ID NO: 2	**Acgcctcccccagactgtaccagctggacctg**gggaatgcacactgtagct gttgctaccaagaagaggatgatacagctccatcc**cat**cgatttggtgtatcgaga ttggttatgaaat	Overlapping with VH-1 (bold) Murine leader (underlined) Start codon (bold & underlined) DP-specific (normal font)
VH-1		
VH-2		
VH-3		
VL-1 SEQ ID NO: 3	**Gacatcgtgatgacacagtctcc**agacaccctgtctttgtctccaggggaaag agccaccctctcctgcagggccagtcagagtgttagcagcggctacttagcctgg taccagcagaaacctggccaggctcccaggctcctcatctat	Overlapping with DP-1 (bold) Overlapping with VL-2 (underlined)
VL-2 SEQ ID NO: 4	**Ctgacagtaatacactgcaaaatcttcagg**ctccagtctgctgatggtgagag tgaagtctgtcccagacccactgccactgaacctgtctgggatgccagtggccct gctggaggcaccatagatgaggagcctgggagcctggccagg	Overlapping with VL-3 (bold) Overlapping with VL-1 (underlined)
VL-3 SEQ ID NO: 5	**Cctgaagattttgcagtgtattactgtcag**cagtatgatacctcacccgcgtgg acgttcggccaagggaccaaggtggaaatcaaacg	Overlapping with VL-2 (bold)

Respectfully for the applicant,

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